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In This Issue

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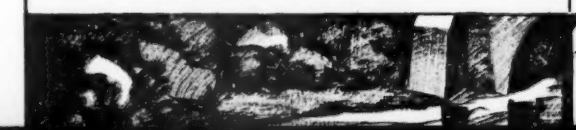

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The Crushed Stone Journal

Official Publication of the NATIONAL CRUSHED STONE ASSOCIATION

J. R. BOYD, Editor

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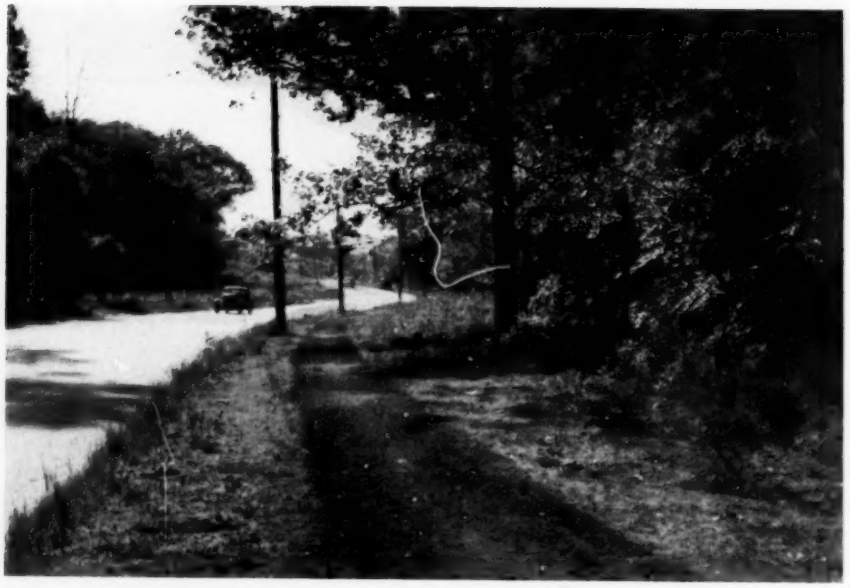

Here, pedestrians are adequately accommodated by an inexpensive type of walkway.

THE
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The Use of Crushed Stone in Sidewalks for Highways

By A. T. GOLDBECK
Engineering Director,
National Crushed Stone Association

◆ **Highway engineers are fully conscious of their responsibility to so design highways that accidents will be minimized. Dangers due to design must be eliminated. In some locations adequate provision must be made for the safety of numerous pedestrians. Sidewalks or walkways are rapidly becoming recognized as a necessary feature of highway design, especially near populous centers. In the present article a few of the ways of using crushed stone for walkways are discussed.**

ALTHOUGH highways are designed primarily for the accommodation of motor vehicle traffic, in certain localities there is also considerable use of the highways by pedestrians. Naturally, most of the pedestrian traffic occurs near centers of population rather than in the rural districts. During the period of development of suburban areas, sidewalks are frequently non-existent and in such localities pedestrian traffic becomes a decided hazard, particularly near school centers and local commercial centers. It is there that sidewalks are a necessary adjunct to the highways from the standpoint of safety alone. Beyond the centers of population, where pedestrian traffic becomes practically negligible, it is unnecessary to give sidewalks very much consideration, for in rural localities they probably cannot be justified, but pedestrian traffic accident records will be found to justify their use in suburban, semi-rural locations.

Sidewalks for highways do not receive the concentrated use of city sidewalks. They are not subjected to heavy loads except perhaps at entrance ways and the amount of abrasion they receive is relatively small. Accordingly, it is unnecessary to provide sidewalks for highways of the types usually employed in the city. Furthermore, the extreme smoothness and nicety of finish of city sidewalks hardly become necessary in highway sidewalks.

There are no well developed standards for highway sidewalks but it would seem that they should have the following characteristics:

1. They should be located with respect to the side of the road at a sufficiently safe distance.
2. Their width should be adjusted to the local needs.
3. Their thickness should be adequate to support pedestrian traffic at all seasons of the year without distortion and if necessary they should have extra thickness where driveway traffic is to be supported.
4. For the best results they should have a waterproof surface of sufficient stability to resist indentation in warm weather and of sufficient strength to withstand snow removal equipment. They should be resistant against abrasive action and against the wash of surface water due to heavy rains.
5. Their durability under freezing weather conditions should be reasonably high so as to prevent undue maintenance expense.

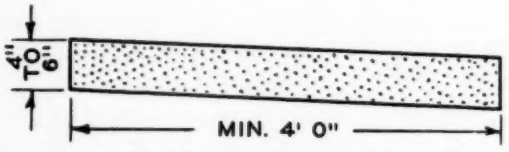
It is felt that crushed stone lends itself admirably to the construction of sidewalks which will meet the above conditions and it is proposed in the present article to describe briefly several suggested types of construction employing crushed stone, which will be suitable for this purpose. No doubt other types will occur to a number of readers for there are many variations possible in sidewalk design and construction.

Discussion of Desirable Characteristics of Highway Sidewalks

1. *Location.* A sidewalk is intended to isolate pedestrians from automobile traffic. Accordingly, a safe distance of separation of the sidewalk from the paved highway is essential. If a curb is used at the sides of the pavement it would not seem advisable to place the sidewalk against the curb, but rather there should be used a parking strip at least 5 feet in width and preferably wider between the sidewalk and the curb. Where no curbs are used adjacent to the pavement, the probability is that here the speed of traffic will be greater and safety dictates the desirability of a still further separation of pavement and sidewalk. Several feet beyond the outer edge of the drainage ditch-line seems to be a proper location. It is not advisable to locate the sidewalk on the shoulder between the ditch and the side of the pavement. Certainly, back of a guard rail is a safer location than in front of it. On sidehill construction a proper location may be at the top of the slope. Each location, of necessity, presents a special case and many considerations may have to be taken into account in locating the sidewalk with respect to the pavement, but it should be borne in mind that first and foremost the element of safety should govern, for otherwise the purpose of the walk will be defeated.

2. *Surface Drainage.* Obviously, surface drainage is a very important matter if the sidewalk is to serve its function continuously. This requires a proper lateral slope of preferably ⅜ inch to the foot, and the proper elevation of the sidewalk above the level of adjacent ground or sod. One-half inch difference in elevation will be sufficient.

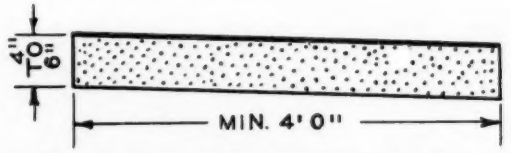
3. *Width.* Sidewalk width is necessarily a variable, depending upon conditions. Four feet, in general, seems like a suitable width, but a greater width may be necessary in some locations.



TYPE I—STONE SCREENINGS

Stone screenings, wetted with water, solution of salt or calcium chloride and rolled.

4. *Thickness.* The question of thickness resolves itself into ability to maintain proper shape under the rather light pressures to which a sidewalk is subjected and also under frost upheaval. A maximum of 6 inches would seem sufficient even under the worst subgrade conditions when the frost is leaving the ground. As little as 4 inches of thickness is practicable in soils which are known to give adequate support to the highway. The behavior of the adjoining highway will give some indication of the load-supporting characteristics of the sub-soil.



TYPE II—SURFACE TREATED SCREENINGS BASE

Base Course—Rolled stone screenings.
Surface Course—Bituminous surface treatment consisting of:

(a) Priming or Tack Coat of MC-1 cutback asphalt or 8 to 13 viscosity tar, 0.3 gal. per sq. yd.
(b) Apply 0.25 gal. RC-1 or RC-2 cutback asphalt or 25 to 35 viscosity tar, covered with 25 to 30 lb. of ½ in. stone chips.
(c) Apply 0.15 to 0.20 gal. of RC-2 asphalt or 25 to 35 viscosity tar, covered with up to 20 lb. ⅛ to ⅜ in. screenings or stone sand per square yard.

5. *Characteristics of the surface.* A sidewalk surface should have the following characteristics:

a. It should preferably, although not necessarily, be waterproof, so as to shed the surface water.
b. It should be relatively fine textured so as to permit of ease in walking.
c. The surface should be resistant to abrasion of pedestrian traffic.
d. It should be smooth and free of local depressions.
e. The surface should not soften excessively or "pick up" in times of hot weather.
f. The strength of the surface should be sufficient to withstand snow removing equipment.

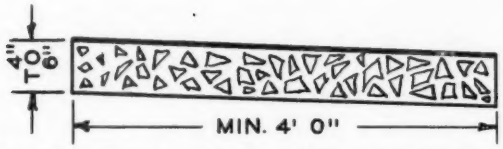
Suggestions Regarding Types of Crushed Stone Sidewalks

In the following discussion it is proposed to describe briefly several different types of sidewalks in which stone screenings or crushed stone are employed together with different types of binding materials. These descriptions will begin with the cheapest and simplest type and will extend to the most elaborate type. All of them should give adequate service commensurate with the money expended.

Type I—Stone Screenings.

The most simple type of sidewalk is one made with stone screenings. The construction consists of

merely filling a trench of the desired width with stone screenings and compacting them by rolling, preferably while they are moist. Screenings for this purpose should contain the dust of fracture and this will serve to bind the screenings together. The use



TYPE III—SURFACE TREATED WATERBOUND MACADAM

Base Course—¾ to 1½ in. (square opening sieves) crushed stone, filled with dry screenings, rolled, preferably after wetting.
Surface Course—Same as in Type II.

of admixtures of either calcium chloride or of salt should aid in bringing about better compaction and in making the surface more resistant to dusting. The salt or calcium chloride to the amount of about 1½ lb. per sq. yd. of surface may be applied in the form of a solution prior to rolling. Caution should be used not to have the above described solution come in contact with valued vegetation for both salts are destructive. Either untreated or treated screenings will serve as a wearing surface or as a base to be covered later with some form of bituminous surface.

Type II—Surface Treated Screenings Base.

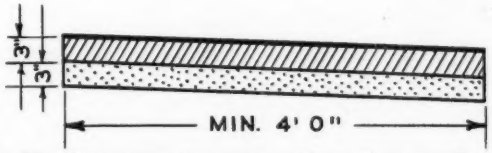
Type II consists of stone screenings compacted to a thickness of 4 to 6 inches and surface treated with bituminous materials and stone chips. The stone screenings should extend from either the No. 4, ⅜ or ½ inch down to dust and preferably should contain the dust of fracture which serves to make the screenings mixture dense and helps to bind the coarser fragments together. If the base is to be 6 inches thick, greater density will be obtained if it is compacted into two layers. If the screenings are moist, greater density is possible under the action of a roller than if they are laid dry. A small amount of clay or top soil present in the screenings will not be detrimental, but may actually serve to help bind the screenings together. It will be desirable to have not more than 20 to 25 per cent of dust passing the No. 100 sieve. The mixture of screenings with that percentage of moisture which will make for greatest compaction under the action of the roller will be desirable. It is not feasible as a rule to go to much expense in grading screenings to a particular gradation and, as a matter of fact, the difference in results obtainable with a wide range in gradation will probably not be noticeable. A light power-driven roller can be used to very good advantage in compacting the base, but in its absence a hand-roller will give satisfactory results.

After the screenings layer is rolled to the proper grade it should be allowed to dry out so that the surface appears dry for at least an inch in depth. It is then ready for surface treatment with bituminous material. A prime coat should first be applied, consisting either of medium curing cutback asphalt, MC-1, or 8 to 13 specific viscosity tar. They should be applied at the rate of 0.30 gal. per sq. yd. Both of these materials have good penetrating properties and will produce a tack coat having good adhesion to subsequent applications of bituminous materials. After this tack coat has cured for at least 24 hours, and preferably longer, a second application of a bituminous material should be made. For this purpose it is advocated that 0.25 gal. rapid curing cutback asphalt RC-1 or RC-2 or asphaltic emulsion or 25-35 viscosity tar, TC-4 be used, covered with ½ inch stone chips graded as follows:

Square Openings	*Total Per Cent Passing*
¾ in.	100
½ "	90—100
⅜ "	40— 75
No. 4	0— 15
No. 8	0— 5

These chips should be applied at the rate of 25 to 30 lb. per sq. yd. They should be rolled thoroughly and broomed after rolling, should this be necessary in spots to bring about a uniform appearing cover. Sufficient rolling should be given to thoroughly embed the chips in the bituminous material.

In all probability the wearing surface thus produced will be somewhat rough for pedestrian travel,



TYPE IV—STABILIZED SCREENINGS BASE, SURFACE TREATED

Sub-base Course—Stone Screenings rolled.
Base Course—Stone Screenings mixed with stabilizing emulsion, RC-2 cutback asphalt or suitable grade of tar.

especially immediately after finishing, and there probably will be a slight excess of stone chips, but it is advocated that the surface be used in its condition, finished as above described, for at least a month so that the volatile portion of the cutback asphalt will

have a chance to disappear by evaporation and the surface become thoroughly set. It may then be desirable to further seal the surface so as to give it maximum durability. Any loose stone chips should first be broomed off the surface and at a period when the surface appears dry, it should be given a very light coating of RC-2 rapid curing cutback asphalt

THIS SIDEWALK IS BUILT WITH A COLD LAY BITUMINOUS CONCRETE TOP, NEAR A SUBURBAN SCHOOL, ON AN ARTERIAL HIGHWAY.

applied at the rate of 0.15 to 0.2 gal. per sq. yd. This should then be covered with fine dustless screenings or stone sand at the rate of approximately 20 lb. per sq. yd. This cover material should then be rolled thoroughly and the result will be a dense, smooth surface having considerable strength and durability.

Type III—Surface Treated Stone Base.

Type III is like Type II except that the base is constructed in the same manner as waterbound macadam, making use of crushed stone instead of screenings. For this purpose ¾ to 1½ inch stone is advocated, graded so that it will pass the following specifications:

Square Openings	*Total Per Cent Passing*
2 inch	100
1½ "	90—100
1 "	20— 55
¾ "	0— 15

After the coarse stone has been lightly rolled to grade, it should be filled with fine stone screenings not exceeding the No. 4 sieve in size and containing plenty of dust. The stone should be dry when filled with the dry screenings. After covering the coarse stone with an excess of fine screenings, rolling should continue and as the screenings filter into the voids, additional screenings should be used so that the final result will be a complete filling of the voids. Finally, the surface should be sprinkled with water so that a grout appears under the roller. This method of construction is not advocated unless a power roller is available. If the subgrade is of a plastic nature, it will be advisable to use a 1-inch layer of screenings under the coarse stone for otherwise the plastic clay subgrade will work its way up into the voids between the stone and this will have a lubricating effect leading to sponginess when the frost is thawing.

Finally, after rolling is completed, the surface should be allowed to dry out and then given a surface treatment of bituminous materials exactly as described under Type II.

Type IV—Stabilized Screenings Base—Surface Treated.

This type consists of a layer of stabilized screenings laid on a layer of plain rolled screenings and the surface is finally surfaced with bituminous materials. The procedure is to first lay a compacted layer 3 inches in thickness of stone screenings containing the dust of fracture and extending up to as high as ½ inch in size or smaller, depending upon the screenings available.

The next 3 inches should be built with stone screenings which are mixed with one of the bituminous stabilizing materials. For this purpose special stabilizing emulsions are made and RC-2 cutback asphalt or 16-22 or 22-36 specific viscosity tar may be used. It is desirable that the stabilized screenings have the following gradation:

Square Openings	*Total Per Cent Passing*
⅜ inch	100
No. 4	85—100
No. 8	55— 80
No. 16	30— 60
No. 30	20— 50
No. 50	15— 40
No. 100	10— 30
No. 200	5— 25

It should be borne in mind, however, that the effectiveness of bituminous stabilized screenings depends upon denseness and waterproofness obtained by the presence of sufficient fines and the waterproofing of those fines. Consequently, it has been found that a deficiency in dust does not lead to the best results and enough dust should be provided even though it is necessary to add clay to the mixture.

When emulsions are used apparently the addition of clay is beneficial, rather than harmful.

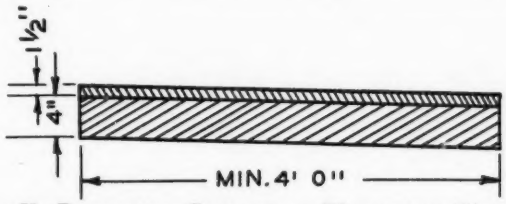
Another point which must be taken into consideration when using bituminous materials for stabilizing screenings is the fact that optimum results are obtained when the finished mixture, after rolling, is allowed to dry out thoroughly. If the bituminous stabilized screenings mixture becomes thoroughly dry, it absorbs water subsequently very slowly and then only in very small quantities. On the other hand, if it does not become dry it may absorb a considerable amount of water and the effectiveness of the asphalt or tar as a waterproofing medium is greatly destroyed and the stability of the mixture is decreased by the presence of the water. It is advocated therefore that only enough water be used in mixing the bituminous materials with the screenings to insure a thorough mixture and to produce that condition which leads to maximum density under the action of the roller. Water seems to be necessary in the mixture to insure the thorough distribution of the rather small quantities of bituminous materials used. Generally the bituminous material is added to the extent of 4 or 5 per cent of the weight of the screenings. The desired amount may be obtained by a competent testing laboratory by determining, with the use of small specimens, that quantity which will be most effective in reducing the absorption of a compacted and dried out specimen to the desired amount.

After rolling the stabilized top layer this layer should be allowed to dry out thoroughly. Such a layer is not particularly resistant to abrasion and therefore it should be given a surface treatment to make it sufficiently abrasive resistant. The prime coat may be omitted from the surface treatment which may otherwise be similar to that given under Type II or the treatment may be simplified by the mere use of 0.2 gal per sq. yd. of RC-2 cutback asphalt or 25-35 viscosity tar or a suitable asphaltic emulsion, covered with either No. 8 to No. 4 chips or with stone sand. The more elaborate surface treatment specified under Type II will give more durable and lasting results, however, than the light surface treatment.

A stabilized screenings layer as above described develops considerable load-carrying capacity and should give most excellent results in sidewalk construction. The mixture of bituminous material and screenings may very readily be made in a concrete mixer if a pug-mill is not available.

Type V—Bituminous Concrete on Waterbound Macadam or Stabilized Screenings Base.

The base for this type may be constructed either by the method described under Type IV or by the use of waterbound macadam as in Type III. Instead of the bituminous materials used in Type IV the screenings may be stabilized by the admixture of



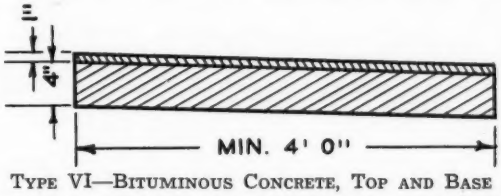
TYPE V—BITUMINOUS CONCRETE ON WATERBOUND MACADAM OR STABILIZED SCREENINGS BASE

Base Course—
(a) Waterbound Macadam as in Type III or
(b) Stone screenings stabilized with calcium chloride salt or suitable bituminous materials.

Surface Course—Fine graded, hot or cold laid bituminous concrete.

small quantities of salt or of calcium chloride, especially where limestone screenings are used. Where these salts are employed, one of the best methods of procedure is to mix the salts with the screenings and water in a concrete mixer. The amount of water added, just as in previously described types of construction, should be just sufficient to create maximum density after compaction and the amount of salt should be roughly 2/3 lb. per sq. yd. per inch of thickness.

Upon such a base should be laid about 1½ inches of fine graded, either hot or cold, bituminous con-



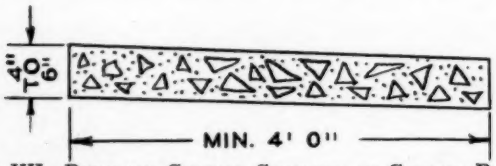
TYPE VI—BITUMINOUS CONCRETE, TOP AND BASE

Base—Dense Type Hot or Cold Bituminous Concrete.
Surface—Dense Type, Fine Graded, Hot or Cold Bituminous Concrete.

crete. There are a great many different kinds of bituminous concrete mixtures which would be suitable for this purpose, but in general they should be of the dense type with a sufficiently fine grading to give a smooth surface which can be walked upon without discomfort. Such bituminous concrete mixtures are so standardized and may be purchased from so many commercial mixing plants that it hardly seems necessary to describe them.

Type VI—Bituminous Concrete Top and Base.

Type VI is a further improvement over Type V in that the base is made with either a hot or cold bituminous concrete, preferably of the dense type so as to exclude moisture. The surface should be made of fine graded hot or cold bituminous concrete having a fairly dense gradation. Here, again there are



TYPE VII—PORTLAND CEMENT CONCRETE OR CEMENT-BOUND MACADAM

One course construction with Portland cement concrete or macadam grouted with Portland cement grout.

many types of bituminous concretes available both in the standard and proprietary mixes. These types are all well-known in highway construction. It is to be borne in mind, however, that some of them require a considerable amount of traffic to bring about a proper blending of their constituents and to render them dense and durable. Because of the comparatively small pressures exerted on sidewalks and the comparative infrequency of load application, it would seem desirable to use a somewhat softer asphalt than normally employed in pavement construction and likewise a somewhat thicker film, especially in the wearing surface.

Type VII—Portland Cement Concrete or Cement-Bound Macadam.

The usual two-course Portland cement concrete type of construction can be used for sidewalks for highways and gives excellent results. One-course construction, made with the same mixture throughout the depth of the sidewalk, may likewise be employed to good advantage.

Still another form of Portland cement concrete is cement-bound macadam. This type would seem to lend itself admirably to sidewalk construction. It consists of first laying a rather large size crushed stone, say 1½ to 3 in. in size, and rolled with a light roller to the required compacted depth. The stone is then grouted with a mixture of 1 part of cement to 2 parts of rather fine sand or stone sand. This grout is mixed in a concrete mixer with sufficient water to produce a grout which will pour readily. After the stone is grouted, it is still further rolled to assist in working the grout through the voids and to force the large stones back into position. Finally, if any surface voids are present, a stiff grout is worked into them and the surface is finished by the use of a template worked with a see-saw motion. Just as in the case of normally constructed concrete sidewalks, expansion joints must be provided, preferably at intervals of 90 ft.

Conclusion.

No attempt has been made in the preceding discussion to go into great detail regarding specifications, but merely to suggest several types of sidewalks which can be constructed with crushed stone. Many other types are possible and the local prices and availability of materials may make it desirable to work out still other variations, not only in size of stone used, but also in the type of binding material employed and in the thickness of the base and wearing surface. Excellent results may be obtained economically in highway sidewalk construction with crushed stone used in a number of different ways.

Motor Vehicle Registrations in 1937 Increase 1,539,000 Over Year Before

MOTOR vehicle registrations in 1937 amounted to 29,705,220—an increase of more than 1,539,000 over the preceding year, according to State reports to the Bureau of Public Roads of the U. S. Department of Agriculture. There were registered 25,405,728 automobiles, 4,255,296 trucks, and 44,196 busses.

Registration receipts totaled $337,410,000. Other receipts for permits, certificates of title and from miscellaneous sources brought the total to $399,613,000. Additional payments to States by motor carriers, such as taxes on gross receipts, ton-miles, passenger-miles, and as special license fees and franchise taxes, amounted to $16,216,000.

New York registered the most vehicles, 2,453,542; California was second with 2,327,984.

Increases in registration of more than 8 per cent were reported in Arizona, Connecticut, Florida, Kentucky, Michigan, Mississippi, New Mexico, Oregon, and Utah. Increases of more than 100,000 were reported in California, Illinois, Michigan, New York and Pennsylvania.

According to the Bureau of Public Roads, highway usage increased not only because of the presence of a million and a half additional vehicles, but because of increased use per vehicle. This is indicated by an increase of 7.6 per cent in gasoline consumed as compared with a 5.5 per cent increase in registrations.

Directors Will Hold "Open Meeting" at French Lick on June 16th

TWO departures from customary practice are effected in the decision of the Executive Committee, reached at its meeting held in Washington on April 6th, to hold the mid-year meeting of the Board of Directors of the Association at the French Lick Springs Hotel, French Lick, Indiana, on June 16th. For a number of years members of the Board located in mid-western territory have urged that a meeting be held in a location more convenient to them and to the members in the Southwest than has been our previous practice. Also, it has been urged that interest in the Association in that territory could be materially strengthened should the Board hold an "open meeting" to which all producers conveniently located to the meeting place would be most cordially invited. At the meeting of the Executive Committee held this Spring E. J. Krause and Norman E. Kelb persuasively advanced these suggestions, with the result as previously noted.

With the meeting scheduled to take place at French Lick, an excellent opportunity will be afforded the large number of producers located convenient to French Lick by either rail or highway to attend and obtain a more intimate and comprehensive view of the work of the Association and the many ways in which it serves the crushed stone industry. It is recognized that many in attendance may wish to consult Mr. Goldbeck concerning specific problems and to make this possible, arrangements are being made for him to remain one or two days beyond the meeting, should circumstances require. To hold an "open meeting" of our Board is frankly an experiment, and the results obtained will exert an important influence on future policy in this regard.

A program is being prepared for the meeting which we believe will prove of exceptional interest. Engineering Director A. T. Goldbeck will review the highlights of our research activities during recent years. His talk will be illustrated by appropriate lantern slides which should add much to its interest and value. Administrative Director J. R. Boyd, in addition to his customary report on the fiscal and administrative affairs of the Association for the first half-year, will briefly review important legislative developments during the current session of Congress.

The control of dust continues to be a problem of real concern to the crushed stone industry and seems destined to receive more and more attention from legislators, both Federal and State. There has been introduced during the current session of Congress legislation on this subject which, though lacking any possibility of passage during this session, is certain to receive increasing attention during subsequent sessions. State legislatures are also becoming more active in this field, many states now having laws bearing on this subject on their statute books. Pioneering in this field is the State of New York which at the present time is engaged in developing a code to control silica dust in stone crushing operations. This problem has necessarily been occupying a prominent place in the activities of the New York State Crushed Stone Association which has been actively cooperating with officials of New York. Because what is now being accomplished in the State of New York may well set a precedent for similar activities in other states, it seems especially desirable that members of the Board be fully informed as to developments along this line in the Empire State. Accordingly, we have asked Mr. Otho M. Graves, President of the General Crushed Stone Co., which operates a number of plants in New York State, to review briefly for us the situation as it now exists in New York and to make any observations which he believes would be helpful for our future guidance. The U. S. Department of Labor has recently released a sound film entitled, "Stop Silicosis," and arrangements have been made for the showing of this film during the course of the meeting at French Lick. This phase of the program is certain to prove intensely interesting and valuable to those present.

We hear much these days concerning the displacement of workers by technological development, and industry finds itself too frequently confronted with an apparently woeful lack of knowledge on the part of the layman as to the significant role which industrial enterprise plays in the economy of the country. The man on the street is not aware of the importance of industry to the nation's prosperity and has been led to believe, through misinformation and false propaganda, that technological development is harmful to the worker, largely because industry and business men have been negligent in their responsibility of informing the people of the country of the real facts. It is an encouraging sign that two of

the largest employer organizations are cognizant of this fact and are taking effective remedial steps. The National Association of Manufacturers and the United States Chamber of Commerce are both conducting excellent campaigns in this field. An important part of such campaigns includes the preparation and distribution of educational sound films on many of the subjects upon which enlightenment is needed. We have arranged with the National Association of Manufacturers to have two of these films available at French Lick. Both are sound pictures and they are entitled, "Frontiers of the Future" and "America Marshing On." These pictures are exceptionally well done and of themselves are intensely interesting, to say nothing of their value to this effort by industry to bring about a better understanding by the masses of the place which industry should rightfully enjoy in the nation's welfare.

The Board of Directors is specifically charged with the responsibility of determining the time and place of the annual convention. Circumstances of an emergency character required that the Executive Committee, at its Spring meeting, tentatively select the time and place for the annual convention to be held in January of 1939. The decision of the Committee in this regard will be reported to the Board of Directors at the French Lick meeting for such action as it deems appropriate. Circumstances have developed, the details of which will be set forth at the Board meeting, which make highly desirable the selection of the convention city and hotel at least a year in advance. Consequently, the Board will also have before it the problem of determining a date and selecting a meeting place for the annual convention to be held in January of 1940.

It will be recalled that modification made in the Constitution and By-Laws at the time of the St. Louis Convention in 1936 made the administrative officers of the Association directly responsible to the Board of Directors instead of to the President as had previously been the case. Under this procedure the duties of the Board take on an added significance as it is now peculiarly its function to receive the reports of the administrative officers and to determine Association policy as regards the various activities of the organization. The mid-year meeting affords the best opportunity throughout the year for a careful and studious analysis of Association affairs and for the charting of plans for the future. Upon each member of the Board rests a real responsibility to attend the mid-year meeting and give generously of his counsel and advice. We are confident that each member will recognize this responsibility and make every possible effort to attend.

From past years' experience we have learned that an increasingly large number of the Board members desire to combine with the mid-year business meeting an enjoyable week-end and in this regard the excellent recreational facilities available at French Lick should materially contribute to the pleasure of those who attend and desire to stay over a few days. To the many members of the Board whose custom it has been to bring their wives to the mid-year meeting, let us urge that you do not disappoint us in that regard at French Lick. In fact, we are already assured of an excellent attendance of the fair sex as advance reservations show that a number of ladies are planning to be there. Not only will they be most welcome, but we shall do everything possible to make their visit with us enjoyable.

As was announced in our letter to the Board of Directors of May 3rd, attractive rates will be made available to those attending the meeting, as follows:

Single room with private bath for one person per day including meals	$ 9.00
Double room, twin beds with private bath per person per day including meals	8.00

We have been assured that the best rooms in the Hotel will be available at the reduced rates, and will be assigned in the order in which reservations are received. Request for rooms should be made direct to the French Lick Springs Hotel, French Lick, Indiana, mentioning that rooms are desired in connection with the mid-year meeting of our Board of Directors. It would be helpful if carbon copy of your correspondence with the hotel could be forwarded to the Washington Office in order that we may determine the approximate number to expect.

It is our sincere belief that the French Lick meeting will prove unusually interesting and pleasurable and we trust that not only will all members of the Board find it possible to attend, but that this experiment of holding an "open meeting" of the Board will prove highly successful by bringing to French Lick a representative attendance of the industry in mid-western territory.

The Revenue Bill of 1938[1]

By CLAUDE W. DUDLEY
Tax Counsel, Millers' National Federation

◆ On May 27 at midnight the Revenue Act of 1938 became law without the President's signature. It contains many modifications important to business men and should receive careful study. In the following article Mr. Dudley gives a comprehensive and highly informative analysis of the more important features of this legislation. His observations concerning the growing importance of the tax problem given at the conclusion of the article are particularly worthy of attention.

TWO important features of the Revenue Bill of 1938 are expected to operate as substantial factors in bringing about a general improvement in business. These are the practical abandonment of the undistributed profits tax and the readoption of a sound policy with respect to capital gains and losses.

It has been evident for some time that businessmen were practically unanimous in their condemnation of the undistributed profits tax law enacted two years ago. That law provided for a graduated tax on the undistributed profits of corporations, the rate varying from 7% to 27% depending on the percentage of the earnings paid out in dividends. Realizing that this tax was universally unpopular, the House provided that the maximum tax differential should be reduced to 4%. The House bill provided for a 20% tax on corporate net income, with a credit of 4% of the amount paid out in dividends. In other words, corporations would pay a tax of from 16% to 20% of their net income, the exact rate within these limitations to depend upon the percentage of their earnings which was distributed.

Absolutely convinced of the unsoundness of the undistributed profits tax, the Senate provided for its complete abandonment and substituted a flat rate of tax of 18% on corporate net income.

The Conference Committee has adopted a compromise under which the maximum tax differential will be 2½%. The Conference plan provides for a 19% tax on corporate net income, with a credit equal to 2½% of the amount distributed in dividends. In other words, the maximum rate of tax on corporate net income is 19%, and the minimum rate is 16½%, the exact rate to be determined by the extent to which distributions are made to stockholders. The Conference plan also provides that the undistributed profits tax shall be in effect for a period of only two years. Subsequent legislation will be required if the policy of taxing undistributed profits is to be continued beyond that time.

In addition to this substantial reduction in the rate of the undistributed profits tax, relief provisions are to be made which will remove some of its objectionable features. These include a net loss carry-over for a period of one year, a dividend carry-over for a period of two years, and a credit for consent dividends where the stockholders agree to include in their taxable income their proportionate shares of the net income of the corporation, even though the corporation does not actually make distributions to them. Two important relief provisions were added by the Conference Committee. These provisions are: (1) that corporations which have debts outstanding on January 1, 1938, may file a schedule thereof and receive credit for payments thereon as they are made; (2) that corporations with impaired capital shall not be subject to the undistributed profits tax until the deficit is made up.

There is little question that the undistributed profits tax has retarded business, especially in the heavier goods industries. The tax on profits retained for expansion and improvement of plant facilities has been so heavy that few businesses could afford to pay the cost. The reduction in rate to a maximum of 2½% should remove the barrier against the use of corporate profits for plant improvement and should operate to accelerate a general improvement in business.

It is difficult to find any legitimate reason for the retention of the undistributed profits tax in the modified form adopted by the Conference Committee. It will produce less revenue than would be produced under the Senate plan of a flat 18% tax on corporations. Its expense of administration will be vastly greater, both to the Government and to the taxpayer corporations. It will not serve as more than an infinitesimal incentive to make dividend distributions. Its net effect is to add seriously to the complications involved in the preparation and audit of corporate tax returns with no compensating benefits either to the Government or the taxpayer.

The undistributed profits tax applies only to corporations whose net income is in excess of $25,000. The Conference Committee adopted the House pro-

[1] Presented before the Annual Spring Meeting of the American Trade Association Executives, held at Washington, D. C., May 2, 1938.

visions for the taxation of corporations having a net income of less than $25,000. These corporations will be subject to a tax of 12½% on the first $5,000 of net income, 14% on the next $15,000 of net income, and 16% on the next $5,000 of net income. These rates are high in comparison with the tax rates of individuals. An individual does not reach the 12½% bracket until his income reaches $14,000. In view of that fact, there seems to be little justification for a rate of 12½% on the first $5,000 of net income of a small corporation.

With respect to capital gains and losses, the plan adopted by the Conference Committee provides for three classifications. Short term capital gains and losses are those realized on the sale of capital assets held not more than eighteen months. Short term capital gains are to be accounted for in their entirety in computing net income and are subject to regular normal and surtax rates. Short term capital losses are deductible only against short term capital gains, but provision is made for carrying forward a net short term capital loss for a period of one year and deducting it from the capital gain of the succeeding year. This is a decided improvement over the present law. It is well recognized that persons dealing in the securities and commodities markets realize net gains from such transactions in certain years and net losses in other years. It is extremely unfair to tax them in full upon their net gains and to grant them no tax benefit for their net losses. The provision for carrying forward a net loss for a period of one year will alleviate this inequality in the law.

Long term capital gains and losses are those realized on the sale of capital assets held for more than two years. Only 50% of the long term capital gains and losses are to be taken into account in computing net income. Furthermore, the maximum rate of tax on long term capital gains and the maximum tax benefit from long term capital losses are limited to 15% thereof. In other words, this 15% maximum rate, applicable to both capital gains and losses, is comparable with the 12½% rate contained in the revenue acts for a period of ten years prior to 1934.

Long term capital losses are deductible not only against long term capital gains, but also against other income. In this manner a consistent policy with respect to long term capital gains and losses is adopted, and the inconsistent policy contained in the 1934 and 1936 acts is abandoned. Losses will now be recognized to the same extent as gains. Under the two prior acts, all the gains were taxed, but the deduction of losses was limited to the amount of capital gains in the taxable year plus $2,000. The readoption of a consistent policy with respect to capital gains and losses is commendable and should serve as an incentive to investment of capital in business enterprise. There has been little incentive under recent laws for the wealthier taxpayers to make such investments, when they knew they would be heavily taxed on all the gains and receive little tax benefit from their capital losses.

The third classification of capital gains and losses consists of those realized on the sale of capital assets held for more than eighteen months but for not more than two years. I understand that two-thirds of the gains and losses from the sale of this intermediate class of capital assets is to be accounted for in computing net income. The maximum rate of tax on this intermediate capital gain and the maximum tax benefit from an intermediate capital loss are 20% thereof.

These provisions with respect to capital gains and losses which have been discussed relate only to individuals. The bill provides for full recognition of capital gains of corporations and limits the deduction of capital losses to the amount of capital gains plus $2,000. This is an inconsistent position which should be remedied in the next revision of our tax laws.

The bill provides that where a stock or bond becomes worthless, the resulting loss shall be treated as a capital loss and shall be subject to the same limitations as other capital losses. This is a radical, although a justifiable change in our present law. Previous laws have allowed the deduction of such losses without limitation. I understand that this change will apply to individuals only, and not to corporations.

The bill provides for a new declaration of value for capital stock tax purposes on June 30, 1938, and every third year thereafter. Provision for these periodical redeclarations of value represents a desirable change from the present law, which permits no redeclaration. The declared value for capital stock tax purposes is also used as a basis of exemption for excess profits tax purposes. For this reason, corporations are usually guided in making their declarations by conditions existing in their business at the time of the declaration. With the extreme ups and downs to which business is subject, a declaration of value may within a short time become absurdly high or absurdly low. For this reason, periodical redeclarations should be allowed.

The bill specifically provides that gain or loss shall not be recognized upon an exchange of securities of public utilities corporations which is made pursuant to an order of the Securities and Exchange Commission. Under the Public Utility Holding Company Act many corporations will be required either to liquidate or to re-arrange their corporate structures. The revenue bill provides that the gain or loss on such compulsory transactions shall be postponed until a voluntary realization occurs. With respect to liquidation of corporations generally, the bill also contains a provision increasing from two years to three years the time within which a complete liquidation may be effected.

The Bill does not provide for any relief from the excessively high rates of tax on the net income of individuals. The maximum rate of tax is 79% which is applicable to net income in excess of $5,000,000. A rate of 62% or more applies to all income in excess of $100,000. These rates are believed by many people to be less productive of revenue than lower rates would be. Generally speaking, there is no incentive for individuals to invest money in productive enterprises if their net income is in excess of $100,000. Investment in tax-exempt securities will yield as large a net return with much less risk. The theory has been that these excessively high rates of tax fall most heavily on the wealthier classes. The record shows, however, that this class bears a greater share of the tax burden when the rates are lower. During eleven years out of the twenty-year period from 1917 to 1936, the maximum rate of tax on individuals was in excess of 50%. During those eleven years individuals with income of more than $100,000 paid only 38% of the total income tax paid. During nine of the twenty years, the maximum rate of tax on individuals was less than 50% and in these nine years, persons having net income in excess of $100,000 paid 52% of the total tax paid. It is to be hoped that in the next revision of our tax law, Congress will see fit to reduce substantially the maximum rates of tax on the net income of individuals. Such a policy should not only result in the collection of greater revenue, but should also promote the investment of capital in business enterprise.

The Bill also fails to broaden the tax base although this was urged upon both of the Congressional Committees. This is vitally important to promote tax consciousness. That is the only approach by which we can ever hope to halt the forward march of increased governmental expense. That is the real need. The discussion of tax rates and even tax policies is of insignificant importance in comparison with the vital necessity of reducing the outward flow of public funds.

The contrast between the government's financial position as it existed a century ago with that existing today is striking. At that time the public debt had just been paid in full. In commenting upon this achievement Andrew Jackson had the following to say to the Congress in his message of December 3, 1836:

"The experience of other nations admonished us to hasten the extinguishment of the public debt; but it will be in vain that we have congratulated each other upon the disappearance of this evil if we do not guard against the equally great one of promoting the unnecessary accumulation of public revenue. No political maxim is better established than that which tells us that an improvident expenditure of money is the parent of profligacy, and that no people can hope to perpetuate their liberties who long acquiesce in a policy which taxes them for objects not necessary to the legitimate and real wants of their Government."

At the present time, one hundred years later, the public debt is at the highest point in our history and will cross the forty billion mark in the next fiscal year. We are now in our eighth consecutive year of Federal deficits. A deficit for the ninth consecutive year is already a foregone conclusion. The amount of it is unknown, but it will certainly be not less than three billions of dollars.

I like to think of a government as nothing more nor less than the mass of its citizenship viewed collectively, and I am immediately reminded of the proposition that the whole is no greater than the sum of its component parts. I ask each of you whether you are individually in a position to stand nine consecutive years of deficit in your own accounts. I venture the opinion that few of you are able to do so. You may be able to stand one, two or three years but by the end of that time your bankers will be sure to ask embarrassing questions. Government credit is exactly the same as individual credit in this important respect, that it is good only so long as there is an apparent ability to repay. It is not inexhaustible as history has proved time and time again.

The total tax collections, Federal, state and local, were estimated a year ago at not less than twelve and a half billions of dollars and total government expenditures were estimated at not less than fifteen billions of dollars. This means that approximately one-fourth of our national income is spent by the

Federal, state and local governments. It means that these governments are spending $115 per year for every man, woman and child in the country. It means that a family of four persons is carrying a load of $460 for public expenditures. If the fact that this bill is being paid by all the people in various and sundry forms of indirect taxes were fully realized by the people themselves, it would not take long to halt the upward trend in government expense.

There are some faint signs that the individual citizen is beginning to realize what the tax burden means to him. The Gallup Poll indicates that 79% of the people favor aid to business through reduced taxes rather than increased governmental expenditures as a means of combating the present depression. The "War on Squandermania" now being waged by the Massachusetts Federation of Taxpayers Associations, consisting of 200 local associations united into one state-wide federation, is an encouraging development. The organization of the Tax Centinels by the student body of Rensselaer Polytechnic Institute is another recent example of display of tax consciousness. The members of that organization pledged themselves to pay 25% of the cost of their purchases in pennies as a reminder to themselves and to the merchants that this was the amount of the tax burden involved in the transaction. The supply of 250,000 pennies in the city of Troy, New York, was soon exhausted and emergency calls were made to banks in neighboring cities to replenish the supply. These and other items which have been recently reported show that the movement toward tax consciousness is on and once it has gathered full momentum, it will be hard to stop.

The question naturally arises as to what industry can do in an effort to stay the progress of increased governmental expense. I think that the time has come when industry must take up the burden of showing to the people of the country exactly what the situation is and the remedy for it. Some of the industrial leaders are apparently in the same frame of mind, for I note that The Texas Corporation is embarking on an advertising campaign designed to tell the facts with respect to the tax burden which is now being carried. This is encouraging, but I think that concerted effort over a long period of time will be required to accomplish results. The industries which you gentlemen represent spend hundreds of millions annually in experimental work of various kinds, in the development of new processes, in the discovery of new products, and in the promotion of new uses for goods of various kinds. Not the least important of the work in the laboratories of industry is that which seeks to reduce the cost of production. It is strange that so little has been done in an effort to reduce that item of cost which has been moving constantly upward for generations, namely, the cost of government. Perhaps it would have availed your industries little to have expended any great amount of time and money in such an effort in the past, but I believe that the time has now come when the effort may be made with reasonable hope of success. If all of your industries would unite in a concerted effort to bring to the individual citizen a realization of what the tax burden means to him, it would not be long before the progressive increase in governmental expenditures would be stopped. The people would then demand from their representatives in the Federal and state legislatures economy in government expense. Once that is brought about, economy will soon be achieved.

That which I ask your industries to do cannot be done quickly, but I am firmly of the belief that it can be done. It is vitally necessary not only to save capital from the strangling effects of confiscatory taxation, but also to save the industrial worker, the farmer, and the business and professional men from the devitalizing effects of uncontrollable inflation, the unavoidable aftermath of a governmental policy of extravagance too long endured.

This is an opportune time to think in terms of decades. Viewing the last two decades in retrospect, we find that the decade of the 20's was one of excessive business expansion, excessive speculation in land and securities, excessive private loans, both domestic and foreign, excessive pyramiding of securities, in short, a decade of business excesses. It was accompanied by a deficiency in governmental regulation and control. The decade of the 30's has been one of excessive expansion of governmental activities, excessive governmental loans and excessive governmental regulation and control. This has been accompanied by a deficiency in business activity. The die is already cast for the remaining twenty months of the present decade, but it is not too early to look forward and plan for the decade of the 40's with the hope and expectation that a reasonable balance between the activities of business and government may be achieved. As a means to that end, I urge upon the industries which you represent the establishment of a permanent clinic whose job will be to subject governmental expenditures to a searching analysis and report to the people the facts with respect thereto.

Fair and Effective Use of Present Antitrust Procedure[1]

By THURMAN ARNOLD
Assistant Attorney General of the United States

◆ **There has recently been inaugurated by the Administration an active campaign to enforce more rigidly the anti-trust laws and Governmental procedure in this regard will apparently be substantially modified from past practice. In the following discussion, Thurman Arnold, recently appointed assistant attorney general in charge of antitrust activities, outlines the Administration viewpoint on this important subject.**

NO GOVERNMENT policy has received such long and unquestioned public acceptance as that expressed by the Sherman Antitrust Act. The domination of market by small groups and the concentration of wealth and power in a few have been a matter of continuing public concern for over 40 years. However, in spite of a governmental religion officially dedicated to the economic independence of individuals, the growth of great organizations in America has been amazing. The Internal Revenue statistics for 1935 show that over 50% of all net corporate incomes is earned by less than one tenth of 1% of the corporations reporting, and 84% of the aggregate corporate net profits is earned by less than 4% of the corporations reporting. We have become a nation of employees. Our private property, our security in our old age and the care of our families when we die usually consist of claims held directly or indirectly against great industrial organizations

Our problem is therefore to define the public responsibility of such organizations, and to determine where industrial efficiency ends and industrial empire building begins. As a practical matter, indicated in the President's statement of February 18th, the question of prices over-shadows the entire subject. We are accustomed to think of prices for building material, for aluminum kitchen utensils and for the various other things which are essential to decent living, as different from taxes. But when these prices are set by a group which dominates the market, the only difference between such prices and taxes is the fact that such prices are levied without public responsibility or public control, and that their proceeds are used for private and not for public purposes. Mr. Justice Brandeis recognized this as early as 1922 when in the New England Divisions case he called a railroad rate a tax. The failure of the public to realize that monopoly prices are taxes has been possible only because our peculiar mythology makes this sort of taxation by industrial organizations a more pleasant way of levying tribute than direct taxation by government, even though tribute when paid in the form of price runs only to the benefit of the few while when levied in the form of taxes it runs to the benefit of all. Yet the effect in reducing our individual incomes is even worse because such industrial prices so officially fixed are taxes levied on the rich and poor alike. And they are worse for another reason because monopoly prices not only tax incomes but tend to destroy the sources of the incomes themselves.

The great mass of our population sell their goods, and services, and labor in the competitive markets. They buy their necessities in a controlled market. This is certainly at least one of the reasons why the income tax figures for 1935 show only 2,110,890 taxable incomes of over $2500 for married persons and $1000 for single persons in a nation of 130,000,000. It is also at least one reason why, with the beginning of the depression of 1929, the Brookings Institution showed that 21% of all American families had family incomes of less than $1000 per year. To illustrate more concretely, we have charged the Aluminum Company of America with substantially complete monopoly control of the domestic source of raw material, coupled with practices which consolidate that monopoly. The result, in terms of prices, is this: Using 1926 as a base, aluminum prices receded from a high of 100 in that year to 84.9 in 1931-1933, a decline in the depth of the depression of only 15%. Meanwhile, to cite another metal, copper prices had dropped from 100 in 1926 to 40.3 in 1932, a decline of 60%, four times the decline in the aluminum prices. And the entire combined wholesale index dropped 35% during the same period, more than twice the decline in aluminum prices. Again, in September 1937, two government invitations for bids on Ford size 6.60 x 16 4-ply tires resulted in an identical price

[1] Delivered at the Annual Banquet of the Trade and Commerce Bar Association of New York, Hotel Commodore, New York City, April 28, 1938.

of $8.11 from all bidders. Investigation was instituted by the Department of Justice. When new bids were taken by the government a remarkable change had taken place. Instead of being identical the bids were competitive. Instead of $8.11 the low was now $4.75. In the meantime the public prices had not substantially varied.

All this by way of introduction, and I will not pursue these observations further because they have been made before. In general, however, I think we can agree that an efficient industrial organization is one capable of producing goods in quantities sufficient and at prices low enough to insure them a permanent place in an American standard of living. This means that whenever competition is destroyed there is no alternative except to interfere with and regulate arbitrary power to maintain rigid prices. In other words, monopoly means, sooner or later, government interference in business. I am willing to face that problem when the need arises. Yet it is precisely because I do not wish those areas of necessary interference to increase and because I want to keep the government out of business that I am an advocate of the consistent enforcement of the Antitrust Laws.

Monopoly Problem Has Become Acute

Today the monopoly problem has become so acute that the President has suggested the need for strengthening the Antitrust Laws and for new legislation relating to an antitrust policy. I am not, however, going to talk this evening on the Antitrust Laws as they should be. That problem is before Congress. I am going to speak on the Antitrust Laws as they are, which is the only present problem before the Department of Justice. In my recent book, "The Folklore of Capitalism," I have suggested that while past enforcement of the Antitrust Laws has saved us from recognizing the cartel system, it has not hampered the growth of organizations which dominate our industrial structure. One reason has been that we have treated the Antitrust Laws as a moral problem and have been more interested in pursuing the will-o'-the-wisp corporate intent than in determining violations of our anti-monopoly policy in terms of practical results. This is a matter of history. The assessment of the blame for what has happened in the past, while an interesting theological enterprise, gives no solution whatever. The duty before the Department of Justice is not to preach against the misdeeds of those who have gone before us, but to devise methods of utilizing the antitrust procedure which is at its disposal efficiently and fairly. That, therefore, is the subject of my address.

In discussing this problem I am going to be as definite and as explicit as I can. However, I know that you all realize that antitrust policy touches fields and boundaries which recede as you approach them and disappear each time you try to stake them out. Definiteness and precision in this area have been impossible even for the courts. It is even more impossible for the prosecuting arm of the government which is trying to follow a consistent policy of treating the mass of violations, not all of which can be prosecuted or even investigated. Yet none of the pressing problems of government can be solved by rule of thumb. This should not prevent us from being as definite and explicit as the nature of the question permits. Where the exercise of judgment and discretion is necessary, we can at least make public the grounds and the policy behind our use of that discretion. I will therefore discuss generally the considerations which underlie prosecution by the Department.

Vigorous Enforcement Necessary During Recessions

The first question of policy which I think should be publicly answered is why we ought not to exercise our judgment and discretion in slowing up antitrust prosecution during the present period of depression in order to give the business the confidence to expand. The legalistic answer to that question is easy. It is found in our national belief in the efficacy of law enforcement as an end in itself.

A better answer is found in the examination of economic realty. It is my conviction that from a long range point of view the vigorous enforcement of Antitrust Laws is never more important than during periods of economic recession. Such periods give the larger and stronger firms new incentives and easier opportunities for extending their control over a narrow market. It is during these periods that the smaller firms, weakened by declining sales and profits, are most susceptible to destruction as the result of practices denounced by the Antitrust Laws. In other words, times of financial failure are the very times when persons with a thirst for power pick up the broken pieces of competing organizations and put them together. The clock can not be turned back when prosperity returns again. It is extremely difficult to recreate competitive organizations which have been destroyed because effective organizations

are the result of habits and discipline and team work. Even the best baseball team after being disbanded for a year can not suddenly come together and win games. Organizations take time to build. They do not become efficient overnight. When they collapse it is anybody's guess whether they can be built up again. Therefore, the further an industry proceeds along the road to monopoly the more difficult is the application of the Antitrust Laws for the reason that the Antitrust Laws in themselves can not rebuild the competitive organizations which have been destroyed.

We recognize that competition may be destroyed not only by active suppression; it may also be destroyed by the over-competition resulting from a temporary over-supply and a catastrophic price decline. Orderly markets are necessary in order to maintain the solvency of competitors. We must recognize that we are living in a world of competing organizations rather than competing individuals; that modern methods make mass production more efficient up to a certain point, and that an orderly market is required for the efficient distribution of goods. However, it is easy in times of depression to broaden the principles underlying the maintenance of orderly markets until they become an excuse for industrial empire building. In the prosecution by the Department of Justice this danger must be kept in mind. There are pressures peculiar to times of depression to maintain former high prices by agreements to restrict production on the principle of the necessity of an orderly market. We naturally can not sanction such distortions of a beneficient principle.

Results More Important Than Intent

A second question of policy important in the antitrust cases is the recognition that results in restraint of trade are more important than the intent which lies behind them. In facing the difficult problem of determining whether size has gone beyond efficiency and has resulted in domination or in the equally difficult question of whether a particular situation requires the application of a principle of an orderly marketing little light is shed by discussing the problem on moral grounds. The difficulties in enforcing the antitrust laws due to the search for that fictitious thing known as corporate intent are set out in Attorney General Cummings' report for 1937:

"Such a standard (the standard of corporate intent) is not only vague but it does not permit consideration of the real factors involved. It does not face the issue whether a combination is in fact one which will tend to produce economies of size or whether it will in actual operation tend to give an opportunity for monopoly profits. The important factor is taken to be the "intent" or "state of mind" of a fictitious corporate individual. Practical results of combinations, which are the only real criteria for effective, as distinguished from sentimental, administration of a policy to encourage competition, are brushed aside. We do not mean that from the multitude of conflicting precedents this statement can be made as a matter of strict legal definition. Nevertheless, it does accurately describe an attitude commonly taken by courts, emphasizing moral culpability and subordinating practical effects of business activities which tend toward monopoly or restraint of trade. * * *

"In other words, actual results are ignored in an effort to determine whether a fictitious personality is acting in an evil state of mind. The antitrust laws have become theological tracts on corporate morality."

These statements reflect my own present opinion. It is therefore my belief that in the selection of cases and also in the trial and presentation of cases we should formulate our standard in terms of the actual results and use of legal privileges by groups in achieving domination of the market rather than their motive. I will illustrate by the case of *Interstate Circuit Inc.* v. *United States* recently argued before the Supreme Court of the United States. A first-run motion picture exhibitor controlling seventy-five per cent of the moving pictures in Texas had entered into practically identical contracts with the major motion picture distributors which prevented second-run theatres from obtaining the best pictures except at higher admission prices than they had been accustomed to charge. Here was a typical use of a legal privilege (the copyright) in such a way as to restrict the outlets for moving pictures and actually to destroy competition. High admission prices were maintained and picture theatres put out of business. The moral question in the case was whether a conspiracy existed. To solve this it was necessary to see the shadowy line where a conspiracy ends and good fellowship and cooperation begins. Observe how the question proposed in another way admits a more practical answer. Is the use of the privilege given by the copyright laws by a group which actually dominates the market an effective suppression of competition regardless of whether a conspiracy is proved? The fact that picture houses have been

closed and the distributing market has been narrowed by the use of this privilege on the part of a dominating group is certainly one of the most important factors in determining whether such a use of the copyright is illegal. It does not give a rule of thumb but it is at least more susceptible of critical examination than whether the group is acting in an evil state of mind. The particular case has not been decided as this is written. However, these considerations were argued strenuously by the Solicitor General and they should be argued in future cases. The Department does not of course control the decisions of the court, but in that area which it does control, that is, in the selection of the cases which are to be prosecuted out of a large number of complaints, only some of which is it even possible to investigate, actual monopoly results should be a more important consideration than motive.

Civil Procedure vs. Criminal Procedure

A third question of policy concerns the choice between the civil and criminal procedures. It is my belief that under the present laws the most effective deterrent lies on the criminal side of the court, in so far as the prevention of illegal practices is concerned. I am talking about the situation as it now exists. I am aware that there are difficulties in a system which presents issues of extreme complication to jurors. I do not deny that by amendment changes might not be wrought upon the civil procedure which would make me modify my present position. However, I am not now discussing amendments, but the use of the tools which are now at hand.

I can make clearer the advantages of the criminal procedure by using an analogy. Violation of antitrust laws is more like the crime of reckless driving under pressure of haste or necessity than it is like conduct indulged in by those who are commonly called criminals. Take the familiar case which is repeated constantly in this country of a young man with respectable background with every expectation of a useful and brilliant career who, in order to meet a social engagement, exceeds the speed laws and kills a pedestrian. There is no way before the jury verdict is handed in to predict whether he will be held guilty of manslaughter. His friends may hope for acquittal and believe that his conduct lies on the side of carelessness rather than recklessness. Nevertheless, no one would deny that such cases should be vigorously prosecuted. No one would assert that the prosecuting attorney should evade his responsibility to submit such issues to a jury. No one would pretend that an injunction which prevented the young man from doing it again would be an effective way to solve the problem of the reckless driver who may, in spite of his respectable background, be more dangerous to society than the burglar.

This is the kind of a crime committed by those who violate antitrust laws, under various business pressures to expand and to get as much of the market as possible. Such pressures can only be offset by a deterrent involving the risk of social stigma. It is as impossible for the Antitrust Division to detect or prosecute all of the violations of the antitrust laws as it is for any police force to detect and prosecute all the persons who drive sixty miles an hour. It is therefore necessary that business men realize that when they indulge in a doubtful practice they are taking the chance of something more than an injunction. They must not be permitted to weigh the chance of pecuniary liability against the chance of enormous profit, and government injunctions do not even involve pecuniary liability. This does not mean that instances will not be found where men who have recklessly or carelessly violated antitrust laws are not entitled to individual sympathy because of their unfortunate predicament. Nevertheless, the public should realize that without this kind of a deterrent the antitrust laws are useless.

The efficacy of the criminal penalty is illustrated in many cases which have been brought to my attention where corporate directors are willing to spend large sums of money belonging to the corporation in order to avoid the social stigma of a small individual fine. The ineffectiveness of civil prosecution is illustrated by the fact that many of them assume almost the appearance of unemployment relief for attorneys, or distribution of patronage by the corporation. During such battles attorneys live magnificently. When a complicated decree is finally rendered a new scheme is often set up designed to appear plausible under the terms of the decree. A new suit is filed. By that time the actual persons who violated the law have sold their stock and are quite ready to accept a consent decree.

A fourth question of policy deals with the use of the civil and criminal proceedings concurrently, and in obtaining a consent decree in cases where the final outcome of the criminal case is uncertain, and relief to competitors and to public is even more important than punishment of offenders delayed by long trials and appeals. It is the position of the Department that it was the intention of Congress in providing

these two concurrent penalties that they could be used. In spite of the confusion recently created, the law on this point is, I think, clear. I know of no ethical policy which contradicts the plain provisions of the act of Congress or which forbids criminal prosecutions while negotiations for the consent decree are pending. However, the test of a consent decree obtained under such circumstances must be relief to the public which would be denied by delay. It should not be on the basis on which private litigation is compromised. One is concerned with the past; the other with the future.

Publicity in Selection and Prosecution of Cases

The fifth question of policy which I wish to discuss is in some respects most important of all. It concerns making public the decisions and attitudes of the Department of Justice in the selection and prosecution of cases. The aim of such a policy is to give business men both guides and warnings in a field which is as admittedly uncertain in definition as the conception of reckless driving on the highway. The reason for such a policy is that there is no way that I know of to avoid the use of discretion and judgment in the conduct of the Antitrust Division. All complaints can not be prosecuted. A selection must be made. Therefore, the grounds underlying that selection should be publicly stated in each case to the end that a consistent and open policy of prosecution may gradually be derived from statements in connection with individual cases.

In the past there has been no continuing practice of announcing at the initiation of each prosecution why that particular prosecution was brought. The complaint itself directed at the narrow issue of the case is not a sufficient guide, because legal strategy necessarily plays a large part in its draftmanship. It is a well known fact that business men have always found difficulty in interpreting the policy of the Department of Justice. The need for information on its policy is evidenced by the countless memoranda which are submitted to the Department in the hope of getting some indication of the Department's attitude. The rulings of no other department can give that information, because it is what the Department of Justice is going to do and not what other departments think which is important to business men. There is no reason why information as to the policies of the Department of Justice so long as it does not involve the granting of individual immunity should not be available to business men. The distribution of that information would be of advantage to both sides. So far as the government is concerned, it would prevent the argument of acquiescence in the cases where the government has not actually prosecuted. So far as business is concerned, it should be both a warning and a guide, because it would localize the Department's interpretation of the law to a particular industry. Obviously, however, it is unsafe to convey that information by promises of immunity to individuals on the basis of the data which they submit. The first step by a large organization in a plan of monopoly control is often the first move in a chess game and the player on the opposing side can not possibly guess the strategy behind it. There is no way of telling whether or not the particular data submitted is a Trojan horse.

The only safe way of building up information as to Department attitudes and policy is through announcements made at the beginning of each procedure, whether it be an investigation or an indictment, or a civil prosecution. Such an announcement might contain general information of how the Department is going to apply antitrust principles to a localized situation (1) the summary of conditions the Department believed to exist in the particular industry which tended toward the violation of the antitrust laws and created the necessity of an investigation; (2) the reason why the particular procedure, whether civil or criminal, was chosen instead of some other kind of procedure; (3) the results the Department hopes to obtain in the prosecution of a particular case.

Let us apply such an announcement of policy to a hypothetical case which is designed to illustrate a number of different types of problems. Suppose the X company has over a period of years crushed competition in its industrial area until there is little likelihood of reviving it by the enforcement of an antitrust decree. Suppose that during the past twenty years there has been such governmental acquiescence in this process that as a practical matter criminal prosecution would be unsuccessful. Suppose the attention of the Department is called to an additional expansion of the X company which will swallow up one of the few remaining competitors and that civil suit is authorized.

To explain its policy in bringing that suit, the Department might publish a careful analysis giving first, the conditions in the industry, second, the reason for its selection for a civil prosecution, and third, the economic result it hopes to accomplish. In this particular hypothetical case, assume that no far

reaching economic results would be expected. It should then be frankly stated that the reason for bringing the suit was to put the X company on notice that no further acquisitions would be tolerated. This would at least lay the foundation for a criminal prosecution for a repetition of such conduct in the future. The report might then go on to state that structure of the X company is in itself a violation of the antitrust laws, but that in view of the improbability of recreating within a reasonable period of time by antitrust prosecution the competition which has been destroyed the Department was using its personnel to push cases under which greater economic results would be expected. This would not be a waiver of the antitrust laws or agreement of immunity. It would only be a reason for the present determination to prosecute given in public and subject to criticism and to revision by Congress. In the particular hypothetical case, the report might contain data from which Congress could further investigate the conditions and devise more effective techniques than those now available for meeting such situations. If the Department was wrong in its conclusion, it could be brought before the bar of congressional judgment.

After such a report, any business man connected with the industry could make an informed judgment about the interpretation of the antitrust laws by the Department in that particular area.

If each important suit were prefaced by such a statement of policy there would be built up gradually within the Department a reasonably consistent policy which would be a matter of public record. More consistency in the changing personnel of the Department might be expected to follow because it is a habit of human institutions to follow a pattern which they have publicly accepted. If changes were made, cogent reasons would have to be developed. If the policy were wrong it could be corrected.

This seems to me to be the only solution to the problem of bringing the present concealed process of the necessary selection of cases out into the open where it can be a guide and a warning. General provisions and formulae can never eliminate the use of discretion and judgment because the fundamental distinctions between efficient size and monopoly control and between the maintenance of orderly market and industrial empire building are too vague. They can become concrete only where they are localized and applied to conditions of a particular industry. No rule which has to apply to completely unlike conditions under dissimilar situations can ever be more than the statement of an ideal. We already have complete public acceptance of the ideal. What we lack is a series of public applications of that ideal to particular industries which will give it more definite application.

I conceive of the duty of the Department of Justice both to the courts and to Congress. To the courts they owe the duty of fair and able presentation of the particular cases which they prosecute. To Congress they owe the duty of marking out an intelligible line of policy of law enforcement. No other department can possibly outline that duty for them in a field where rules of thumb are not possible. Therefore, acting under the advice of the Attorney General, I propose to announce in connection with the particular cases or investigations which are instituted in the future enough information so that the exercise of the discretion in selecting the cases may be as consistent as public announcement and public criticism can make it.

The Problem of Amendment

As I said at the outset, I do not wish to confuse the discussion of fair and efficient enforcement of present antitrust laws with the problem of amendment, which is a separate problem. An analysis of what can be done with present procedure, however, throws incidental light upon the type of amendment which is most desirable. There are unquestionably better ways of investigation than by a grand jury. There are also means of implementing the civil process so that the criminal procedure will not be the only effective deterrent. An analysis of present procedure also indicates that the power of public investigation on the part of the Department might clarify the task of making its policy public and intelligible. These questions I leave for discussion at a later time. One aid to intelligent amendment can be accomplished by public statements in connection with individual cases. They can serve to call the attention of Congress to particular uses of legal privileges such as patents, copyrights, credit, corporate forms of organization, etc., which are being used in particular industries. Remedial legislation arrived at in that way would be definitely directed at particular problems. Such legislation is apt to be more concrete and more adapted to its ends than legislation which relies on general formulae. Our ideal is already well stated in the Sherman Law. It only requires particular application.

On examination by the Senate Committee I stated that I believed that antitrust enforcement should be both vigorous and fair. This paper has been an at-

tempt to give content to those words. By a continuing policy of public statement when individual cases are commenced, I hope to make them even more concrete by giving them a particular application to the various dissimilar situations to which we must apply the general policies of the Antitrust Laws. The Antitrust Act represents a public policy to keep open and free the channels of opportunity which has never been more important than today.

Gasoline Tax Law Receipts Net $761,998,000 in 1937

GASOLINE taxes, inspection fees and similar receipts—resulting from gasoline tax laws in the various states—yielded a net revenue of $761,998,000 in 1937, according to reports of State authorities to the Bureau of Public Roads of the U. S. Department of Agriculture. Similar receipts in 1936 totaled $691,420,000. Consumption of gasoline on highways amounted to over 19 billion gallons and increased 7.6 per cent over the preceding year. Increases are reported in every State except Nebraska and Tennessee.

During the year four States increased the rate of tax by one cent, with the result that the average rate for the United States rose from 3.85 cents in 1936 to 3.91 cents in 1937. Rates of tax ranged from 2 cents in the District of Columbia and Missouri to 7 cents in Florida, Louisiana and Tennessee, The rate of tax does not appear to seriously influence consumption, since for the last two years the greatest percentage increases have all been in States with tax rates above the average, with two exceptions. In 1937 twelve States had increases of over 10 per cent, and in ten of them the tax rate ranged from 4 to 7 cents.

Refunds for non-highway or public use amounted to $43,210,000, an increase of six million dollars over 1936. In addition 650 million gallons were exempted from tax.

Federal-Aid for 1940 and 1941

REDUCTIONS made by the Senate in Federal-aid authorizations for 1940 and 1941, as provided by the bill which was passed by the House of Representatives on April 6th, have been partly restored by the joint conference committee which will make its report to Congress shortly.

In the bill, as it passed the Senate, authorizations for the primary system were cut from $125,000,000 to $75,000,000 for 1940 and $115,000,000 for 1941. The conference report raises the 1940 authorization to $100,000,000, while the 1941 provision remains at $115,000,000. Authorizations for the secondary or feeder-road system which the Senate reduced from $25,000,000 to $10,000,000 for 1940 and 1941 is raised to $15,000,000 for each of these fiscal years by the conference report.

The committee struck out Section 14, which was added to the bill by the Senate and which required the Secretary of Agriculture, in co-operation with the state highway departments, to fix standards of design, etc. Section 12, which called for the penalizing of states diverting their highway revenues to non-highway purposes, was also stricken from this bill by the committee. However, the provision in the Hayden-Cartwright Act of June 18, 1934, calling for the punishment of diverting states, will continue in force and states which persist in diverson may, therefore, still suffer the loss of one-third of their Federal-aid money even though this section is not contained in the new legislation.

Other authorizations and provisions in the road bill as it passed the Senate have not been changed by the conference committee.

Dates Announced for the Sixth Annual Illinois Mineral Industries Conference

THE Sixth Annual Ilinois Mineral Industries Conference will be held next fall on Friday and Saturday, September 30th and October 1st, at the University of Illinois, Urbana. This conference is sponsored by the Illinois State Geological Survey, the Engineering Experiment Station, and the Illinois Mineral Industries Committee. Preliminary plans for the conference call for two major symposia, one on the future energy minerals and the other on new frontiers for the use of industrial minerals. A complete exhibit of the research work which is being done at Urbana is being planned for the information of the mineral industries of the State.

A preliminary program will be issued sometime during the summer and in the meantime inquiries regarding this conference may be addressed to Dr. M. M. Leighton, Chief, State Geological Survey, Urbana, Illinois.

October 1st will be Legionnaire Day in connection with the football game between Illinois and Depauw Universities. Hotel reservations should therefore be made at once.

R. R. Liteheiser Becomes Secretary and Engineering Director, New York State Crushed Stone Association

TO THE New York State Crushed Stone Association we wish to extend our most hearty congratulations for their foresight and discriminating judgment in employing R. R. Litehiser as Secretary and Engineering Director of the Association. For many years Mr. Litehiser has served the Highway Department of the State of Ohio with distinction as Chief Engineer of the Bureau of Tests, and he is widely and favorably known by the producers of that State. He is familiar in intimate detail with the many problems confronting crushed stone producers and by training and experience is exceptionally well qualified to render the New York Association a valuable service. Moreover it is our belief that the work of the National Association can become even more valuable to New York producers when applied to local conditions by one so well qualified to do so as is Mr. Litehiser. We were particularly glad, when he had occasion recently to visit the Washington Office, to offer personally our congratulations upon his new undertaking and to pledge our whole-hearted cooperation. It was our further pleasure to be present at the first meeting of the New York Association held since his induction into office and the enthusiastic reception accorded his inaugural effort foreshadows a gratifying success for this forward-looking undertaking of the New York producers.

R. R. LITEHISER AND A. T. GOLDBECK DISCUSS THE PROBLEMS OF NEW YORK PRODUCERS

(*Left*) MR. LITEHISER ADDRESSES HIS FIRST MEETING OF NEW YORK STATE PRODUCERS

(*Right*) JOHN RICE, JR., (LEFT) VICE-PRESIDENT, NEW YORK STATE CRUSHED STONE ASSOCIATION, PRESIDES AT THE APRIL MEETING, IN THE ABSENCE OF PRESIDENT REID CALLANAN.

Paul Reinhold is Re-elected Vice-President of ARBA

WE MAY well take pride in the fact that one long identified with the crushed stone industry has been accorded a position of honor and distinction with the American Road Builders' Association. At their Annual Spring Meeting Paul Reinhold, Secretary-Treasurer of Reinhold and Co., Pittsburgh, Pa., was reelected Vice-President for the Northeastern District, a position which he has ably filled during the past year. As a further recognition of Mr. Reinhold's exceptional ability as a presiding officer he was given the responsibility of acting as toastmaster at the Road Builders' Annual Dinner. Those who had the pleasure of hearing him serve in a similar capacity at the Banquet held during our Fifteenth Annual Convention in Pittsburgh in 1932 will know that he discharged this difficult task in highly commendable fashion. Mr. Reinhold was accompanied on his trip to Washington by Mrs. Reinhold.

PAUL REINHOLD

Wm. M. Andrews Represents Association at Chamber Meeting

MR. WILLIAM M. ANDREWS, Union Limestone Co., New Castle, Pa., was in Washington during the week of May 2 in his capacity of National Councillor for the National Crushed Stone Association at the Annual Meeting of the Chamber of Commerce of the United States. Mr. Andrews has served the Association for a number of years as National Councillor to the Chamber and we are indebted to him for taking the necessary time from his personal affairs to participate in our behalf in the various activities of this annual meeting.

WM. M. ANDREWS

The press of the country has carried in considerable detail the highlights of the Chamber meeting which proved to be one of the most successful and constructive in its history. Because the crushed stone industry is constantly threatened with Government competition the Chamber's declaration of policy on this subject should be of especial interest and we, therefore, reprint in full the following resolution adopted at the annual meeting:

Government Competition

"Government competition with private enterprise is taking many forms and is retarding business recovery. Few private business enterprises, however efficiently organized and conducted, can long survive in the face of competitive activities from the government itself, or activities promoted by the government and supported with subsidies directly or indirectly from the public treasury.

"Government agencies, federal and state, should cease all enterprises through which they seek to supplant their own citizens in supplying the public, should supply their own needs, whether for materials or for construction, by contracting with the lowest responsible bidder after obtaining the widest possible competition, and should cease subsidizing one form of business, such as cooperatives, against other forms. Government should always leave open opportunity to all of its citizens for the development of all legitimate forms of lawful enterprise, each form being allowed to succeed or fail in accordance with its own merits. These are the only courses for government to follow in fairness to private enterprise and its employees, to consumers, and to taxpayers generally.

"In order that the public may be informed as to costs which result from departure by government authority from the principles we advocate as in the true interest of the general welfare, we urge that the costs of operation of government activities which are in competition with private enterprises should be ascertained in accordance with standard business accounting practices and be made public. The accounts of such enterprises should be completely separated from the accounts for non-competitive activities of the government and for each activity periodic balance sheets and income and expense statements should be prepared and made public."

Visitors to the Washington Office

HAROLD R. BROWNSON, Rowe Contracting Co., Malden, Massachusetts, paid us a brief visit en route North from a winter vacation in Florida. Mr. Brownson, it will be recalled, was elected to the Board of Directors of the Association at the Annual Convention held in Cincinnati last January. His ability and popularity are widely recognized by the industry in Massachusetts, as evidenced by his election last Fall to the Presidency of the Massachusetts Crushed Stone Association. His keen knowledge of industry problems in the New England territory and his general interest in the welfare of the industry should make him a welcome and valuable addition to the Board.

HAROLD R. BROWNSON

We are glad to note an increasing number of visitors to the Washington Office which since the last issue of the *Journal* have included H. H. Wagner, Manager, Pennsylvania Stone Producers Association, Harrisburg, Pa.; A. L. Worthen, Vice-President, and R. J. Reigeluth, Treasurer, New Haven Trap Rock Co., New Haven, Conn.; R. P. Immel, Assistant Manager, American Limestone Co., Knoxville, Tenn.; A. W. McThenia, Acme Limestone Co., Ft. Spring, W. Va.

We sincerely regret having missed an opportunity for a chat with Mr. and Mrs. Fred Earnshaw who called the office while in Washington en route to Youngstown from their winter vacation in Florida. It is gratifying to learn that Mr. Earnshaw's health has greatly improved and we hope the benefits of his Florida trip will be permanent.

MANUFACTURERS' DIVISION of the NATIONAL CRUSHED STONE ASSOCIATION

These associate members are morally and financially aiding the Association in its efforts to protect and advance the interests of the crushed stone industry. Please give them favorable consideration whenever possible.

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